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L4: Entry 1 of 1 File: USPT Jul 21, 1998

DOCUMENT-IDENTIFIER: US 5783216 A
TITLE: Methods for inhibiting rejection of transplanted tissue

DEPR:
As an alternative or an adjunct to masking surface antigens on cells of donor tissues prior to transplantation, such tissues can be grown in transgenic animals which have been genetically altered so that surface antigen expression is diminished. Such transgenic animals can be made by standard transgenic techniques, employing genes which delete or inactivate the gene encoding the target antigen, or delete or inactivate a gene necessary for its expression on the cell surface, by homologous recombination.

DEPR:
Other embodiments are within the following claims. For example, the procedures described above for treatment of islet cells and liver cells can be used to treat muscle cells for transplantation into patients with muscular dystrophy, as follows; muscle cells, like islet cells, bear rejection-stimulating HLA class I antigens, and also express class II antigens. Human donor muscle cells will be obtained by biopsy of living related donors or brain dead donors using a 14-16 gauge cutting trochar into a 1-2 inch skin incision. The fresh muscle plug will then be lightly digested into a single cell suspension using collagenase, trypsin and dispase at 37.degree. C. Floating debris will be removed with a pipet and media washes and the viable cell pellet counted after centrifugation at 1000 rpm.times.10 minutes. This cell count will then be used to calculate the amount of HLA class I and class II antibody fragments to add; treatment will be as described above for islet cells. Similarly, the invention will permit transplantation of cells, from a healthy individual or which have been genetically engineered, into recipients who have a deficiency for a particular cellular component. For example, individuals with hemophilia might be recipients of Factor VIII-producing liver cells from normal donors, or of cells which have been genetically engineered to secrete Factor VIII.

CLPR:
2. The sample of claim 1 wherein said cells comprise genetically engineered cells with increased capacity to express a cellular component.